BC

Ministry of Energy, Mines & Petroleum Resources

1985 ANNUAL REPORT

May, 1986

Hon. Anthony J. Brummet, Minister

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To the Honourable
ANTHONY J. BRUMMET
Minister of Energy, Mines and
Petroleum Resources
Parliament Buildings
Victoria, B.C.

Sir:
I have the honour to submit the Annual Report of the Ministry of Energy, Mines and Petroleum Resources for the year 1985.

Yours truly,

Roy Illing,
Deputy Minister

The Honourable Robert G. Rogers
Lieutenant-Governor of British Columbia

May It Please Your Honour:

I respectfully submit the Annual Report of the Ministry of Energy, Mines and Petroleum Resources for the year 1985.

Anthony J. Brummet,
Minister

MINISTRY OVERVIEW

The energy, mineral and petroleum industries of British Columbia contributed more than $5.5 billion to the provincial economy in 1985. Solid mineral production was valued at $2.39 billion, oil and natural gas production was worth another $1.02 billion, and the B.C. Hydro and Power Authority reported revenue of $2.13 billion with $280 million of it earned by electricity exports to the United States.

It is the responsibility of the Ministry of Energy, Mines and Petroleum Resources to ensure the orderly development of our valuable resources. At the same time, the Ministry also protects the environment, applies safety standards, collects revenue, formulates policies and advises government. The Minister is directly responsible for three Crown agencies operating in the energy sector: B.C. Hydro, the B.C. Petroleum Corporation and the B.C. Utilities Commission.

Under the Ministry's stewardship, our mining and petroleum industries are consistently the greatest source of direct resource income for the provincial government. In 1985, that revenue amounted to $360 million.

Administering the province's mineral and energy resources and regulating a complex industry is a big responsibility carried out by a comparatively small Ministry — 305 full-time staff or the equivalent. The Ministry is headquartered in Victoria but maintains district operations at nine other locations around the province: Fernie, Fort St. John, Kamloops, Nanaimo, Nelson, Prince George, Quesnel, Smithers and Vancouver.

This report covers the highlights of Ministry operations and provides brief accounts of industry status and energy trends for the calendar year 1985. More detailed information and statistics are provided in a number of other Ministry publications available from:

Ministry of Energy, Mines and Petroleum Resources
Publications Distribution
Parliament Buildings
Victoria, B.C. V8V 1X4
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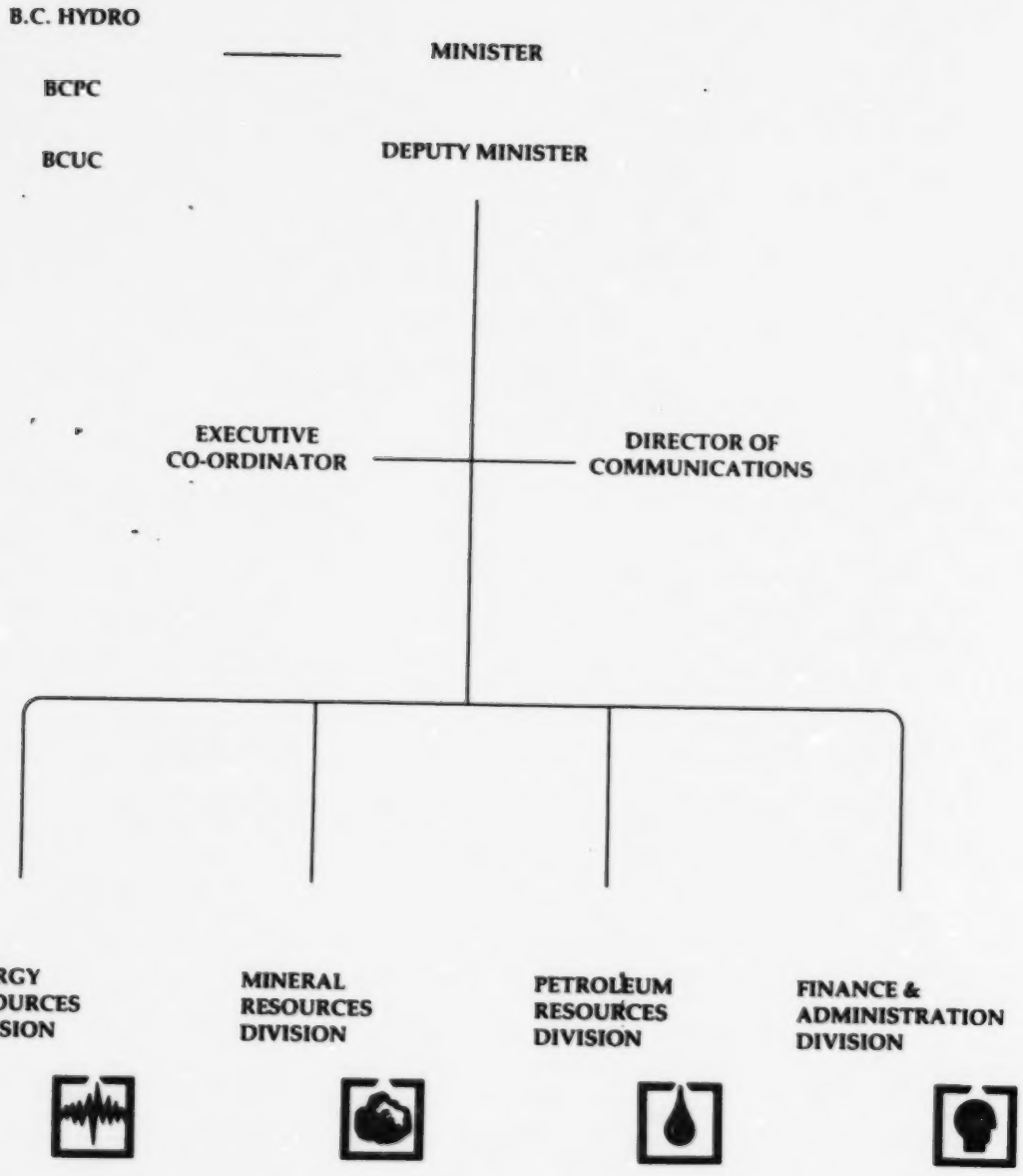

B.C. HYDRO
BCPC
BCUC
MINISTER
DEPUTY MINISTER
EXECUTIVE CO-ORDINATOR
DIRECTOR OF COMMUNICATIONS
ENERGY RESOURCES DIVISION
MINERAL RESOURCES DIVISION
PETROLEUM RESOURCES DIVISION
FINANCE & ADMINISTRATION DIVISION

ENERGY RESOURCES DIVISION

THE ENERGY RESOURCES DIVISION
advises on policies and programs designed to develop British Columbia's energy resources.in such a way that they:

- encourage economic development
- maintain environmental integrity
- balance current demands against future needs
- achieve energy security and, in the long run, energy self-sufficiency for the province.

POLICY DEVELOPMENT BRANCH
Develops and recommends short- and long-term energy policy strategies.

PROJECT ANALYSIS BRANCH
Co-ordinates reviews of proposals for the development, use and removal of B.C. energy resources, ensuring that such projects are in the public interest.

FORECASTS AND SPECIAL PROJECTS BRANCH
Prepares annual forecasts on energy supply and demand in the province and undertakes special studies on energy projects.

The Energy Sector in 1985

Provincial energy requirements increased in 1985 by about four per cent, primarily because of increased consumption of hog fuel and electricity. The demand for refined petroleum products declined.

Provincial natural gas demand increased by approximately 3.2 per cent, mainly as a result of increased residential and commercial use. Pipeline exports of natural gas to U.S. markets declined marginally during the year.

Electricity requirements in the B.C. Hydro system increased by seven per cent in 1985.

Exports of electricity increased by 30 per cent due to regional shortages and the displacement of more expensive thermal-fired generation in the U.S. Pacific Northwest and California.

The province's oil requirements (in the form of refined petroleum products) declined by approximately one per cent from 1984 to 1985. This drop follows a decline of roughly the same magnitude in the period 1983 to 1984 and reflects the effect of continuing conservation and substitution of alternate energy forms.

Oil products provided about 33 per cent of the province's total energy needs in 1985. However, only 25 per cent of B.C.'s crude oil requirements are supplied from within the province. The deficit is made up primarily through transfers of crude oil and refined petroleum products from Alberta.

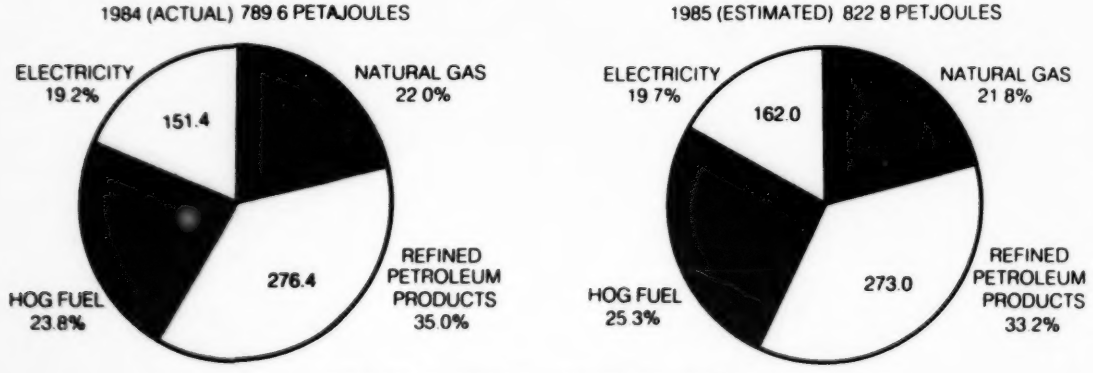
British Columbia End Use Consumption by Energy Type and by Sector, 1984 and 1985 *Petajoules (PJ)* *

	Refined Petroleum Products				
	Motor Gasoline	LFO	Diesel	HFO	Aviati Fue
	1984 (Actual)				
Road and Urban Transport	119.4	—	16.3	—	—
Marine	—	—	9.1	4.2	—
Airlines	—	—	—	—	16.1
Railways	—	—	13.4	—	—
Total Transportation	119.4	—	38.8	4.2	16.1
Industrial	—	2.1	29.2	19.0	—
Residential***	2.4	11.8	3.2	—	—
Commercial and Other Institutional	7.5	5.2	11.1	3.6	2.8
Total	129.3	19.1	82.3	26.8	18.9
	1985 (Estimate)				
Road and Urban Transport	115.7	—	19.5	—	—
Marine	—	—	7.5	2.7	—
Airlines	—	—	—	—	14.3
Railways	—	—	12.0	—	—
Total Transportation	115.7	—	39.0	2.7	14.3
Industrial	—	1.7	32.2	23.2	—
Residential***	2.0	11.8	2.2	—	—
Commercial and Other Institutional	6.5	5.1	12.0	2.4	2.2
Total	124.2	18.6	85.4	28.3	16.5

* *A petajoule is a standard metric unit of energy equivalent to 25,426 cubic metres of oil, 27 million cubic metres of natural gas or 280 gigawatt hours of electricity.*
** *Less than 1 petajoule.*
*** *Includes apartments and agriculture.*
**** *Rows or columns may not add to totals because of rounding.*
Source: Ministry estimates and Quarterly Report on Energy Supply-Demand in Canada, *Statistics Canada Cat.* 57-003.

Natural Gas	Electricity	Propane	Hog Fuel and Pulping Liquor	Total
—**	—**	—	—	137.8
—	—	—	—	13.3
—	—	—	—	16.1
—	—	—	—	13.4
—**	—**	2.1	—	180.6
79.1	81.4	1.1	180.5	392.4
62.1	39.7	2.3	—	121.5
32.2	30.3	2.4	—	95.1
173.4	151.4	7.9	180.5	789.6****
—**	—**	2.5	—	137.7
—	—	—	—	10.2
—	—	—	—	14.3
—	—	—	—	12.0
—**	—**	2.5	—	174.2
81.4	87.1	1.1	199.9	426.6
64.2	42.5	2.7	—	125.4
33.5	32.4	2.5	—	96.6
179.1	162.0	8.8	199.9	822.8****

B.C. Energy Consumption



* HOG FUEL INCLUDES PULPING LIQUOR AND PROPANE

Highlights

Energy policy initiatives in 1985 focused on: 1) major modifications to the taxation and pricing regimes of the oil and gas industry through federal/provincial agreements; 2) the full implementation of British Columbia's new gas marketing and royalty system; 3) economic renewal through the use of electricity price discounts by the province to attract new, large, industrial power consumers.

The governments of Canada and the oil-and-gas-producing provinces signed two comprehensive oil and natural gas agreements designed to assist the Canadian energy industry.

The first of these, known as the Western Accord, instituted total deregulation of Canadian crude oil pricing and marketing and removed most of the regulations, taxes and fiscal policies that had been imposed on the petroleum industry since introduction of the federal National Energy Program in 1980.

The Western Accord was followed by an Agreement on Natural Gas Markets and Prices, signed between Ottawa and the producing provinces. It provided for a 12-month transition period from government-administered pricing to a market-sensitive price regime for natural gas in both the interprovincial and export markets. The agreement was designed to provide lower prices for consumers and improve market access for producers by allowing direct negotiation between buyers and sellers. It also liberalized export licence conditions, with the proviso that export prices must not be less than prices paid by Canadians in adjacent areas. Prices can be adjusted to meet changing conditions.

This federal/provincial agreement complemented provincial initiatives embodied in the Natural Gas Price Act, which restructured the financial and institutional framework of the natural gas industry to encourage competitive and aggressive marketing while maintaining reasonable prices for British Columbia consumers. A key element of the new arrangement was an explicit royalty system introduced at mid-year.

The Industrial Electricity Rate Discount Act was also passed in 1985. It provides for electricity rate discounts on

incremental consumption of surplus hydroelectricity by large industrial consumers. The objectives of the Act are to contribute to British Columbia's economic renewal as well as to improve B.C. Hydro's financial position for the general benefit of all B.C. Hydro customers. At the end of 1985, eight industrial customers had qualified to receive rate discounts of up to 50 per cent on sales totalling 900 gigawatt hours.

As part of a broader program, work was begun on developing a British Columbia position on energy issues to be discussed with the federal government in its preparation for Canada/U.S. trade negotiations. Improved access to U.S. markets for electricity, natural gas, refined petroleum products and petrochemicals was identified as a desirable objective.

Initiatives to promote natural gas sales were continued throughout the year. A submission on surplus gas availability was presented to the California Energy Commission hearing into future gas requirements including potential use for enhanced oil recovery. The province intervened in the Gas Surplus Determination Procedures phase of the National Energy Board's Natural Gas Export Omnibus Hearing and commenced a review of its own provincial gas surplus determination procedures. Intervention was made in collaboration with the British Columbia Petroleum Corporation (BCPC) to the U.S. Federal Energy Regulatory Commission regarding discriminatory provisions of the proposed restructuring of the U.S. gas industry. Similar intervention was made to the National Energy Board regarding changes to the method of regulation of Westcoast Transmission Company's pipeline, in order to reduce financial risk to the province through BCPC commitments. Discussions continued throughout the year with the government of Canada on funding of the proposed Vancouver Island Natural Gas Pipeline.

Westcoast Transmission's natural gas liquids "straddle plant" at Taylor went into operation in 1985, removing saleable propane and butane from the gas before it is pipelined to market.

MINERAL RESOURCES DIVISION

THE MINERAL RESOURCES DIVISION oversees the operation of British Columbia's mining industry and facilitates the orderly development of mineral, coal and aggregate resources in the province.

ASSISTANT DEPUTY MINISTER

INSPECTION AND ENGINEERING BRANCH
Ensures mine safety and mine reclamation practices are followed, using a network of district offices.

- Geotechnical Section
- Mechanical/Electrical Section
- Reclamation Section
- Mines Rescue and First Aid Section
- Environmental Control Section
- Coal Section
- Mining and Petroleum Roads Section

MINERAL GEOLOGY BRANCH
Carries out geological studies and provides the mineral industry with geological data.

- Geoscience Projects Section
- Applied Programs Section
- Resource Data and Analysis Section
- Analytical Laboratory

MINERAL TITLES BRANCH
Administers laws and regulations pertaining to the acquisition and maintenance of mineral tenures, using gold commissioners and sub-recorders in 24 mining divisions in the province.

MINERAL POLICY AND EVALUATION BRANCH
Develops policy initiatives. Provides economic, financial and statistical analyses related to the mineral sector and maintains statistical data.

Value of Mineral Production 1981-85 *($ million)*

	1981	1982	1983	1984	1985
Metals	1,246.7	1,057.5	1,106.0	1,036.9	1,013.1
Industrial Minerals	122.5	95.6	89.5	114.7	106.0
Structural Materials	200.8	164.2	208.4	200.1	199.7
Coal	554.3	566.9	555.8	1,007.5	1,067.5
TOTAL	2,124.3	1,884.2	1,959.7	2,359.2	2,386.3

The Mining Industry in 1985

While the world's major industrial economies have experienced a robust recovery from the 1981/82 global recession, mineral markets have yet to see the full effects of the recovery. In British Columbia, despite increased output of several major minerals, the value of production rose by less than inflation in 1985, registering an increase of 1.1 per cent to almost $2.4 billion. Lower prices, a reflection of world-wide excess production capacity and slow demand growth account for the relatively weak performance. However, there are exceptions. A number of potential new mines neared production during the year while exploration activity increased at several noteworthy prospects. This, combined with expectations for at least somewhat better market conditions for several commodities, augurs well for the future.

Coal, now the province's most important mineral, showed an increase in output and production value despite volume cutbacks and price reductions on some important contracts. British Columbia's coal industry responded to the squeeze by penetrating new markets in Europe, Asia and Latin America. As well, the coal industry continued to make major improvements in productivity and cost control.

Copper, the second-leading mineral, also registered increases in output and value. The increases were in part due to the reopening of the Bell and Brenda mines under the auspices of the province's Commissioner of Critical Industries. Although world copper prices hit new lows in 1985, the trend has been decidedly upward. Copper appears well on the way to recovery from the low point of two years ago when most mines were shut down for prolonged periods.

Lead and zinc output increased significantly, although price declines offset all or most of this effect.

Gold output and value declined in 1985, but the future for gold is good. Silver production was up fractionally, but the value was down.

There was an encouraging trend in new mine development. During the year, Westmin Resources commissioned the new H-W Mine on Vancouver Island. With its rich, multi-metallic deposit, it is a high-value, low-cost operation which can be profitable even in adverse market conditions.

The Blackdome gold mine near Clinton was under construction in 1985 with operations scheduled to commence operations in 1986.

Other properties approaching a production decision included the Lawyers and Nickel Plate projects, both precious metals deposits, and the Mount Klappan anthracite coal project.

Exploration activity continued at the lively pace of recent years, although down from peak levels recorded at the turn of the decade. The quality of exploration activity was high. Among the most promising prospects actively explored in 1985 were the Lara property on Vancouver Island, Midway in the far north of the province, the Energex property in the Toodoggone area and the Silbak Premier property in the Stewart area.

While this was far from a banner year for mining, there is a growing evidence that, for the sector as a whole, 1985 may mark an important turning point.

Mineral Production of British Columbia, 1984 and 1985

	1984 Actual		1985 Estimate	
	QUANTITY	$ VALUE	QUANTITY	$ VALUE
METALS				
Copper ..... kg	280 070 497	517 765 234	302 479 000	581 193 000
Gold ..... g	7 244 440	118 137 206	6 400 000	94 971 000
Iron Concentrates ..... t	198 464	6 584 179	87 000	3 185 000
Lead ..... kg	85 147 484	37 899 396	106 435 000	38 383 000
Molybdenum ..... kg	12 164 806	113 803 442	7 334 000	73 089 000
Silver ..... g	363 378 002	121 364 145	363 692 000	101 329 000
Zinc ..... kg	95 334 645	115 225 652	106 815 000	112 936 000
Others	—	6 121 539	—	8 030 000
Total Metals	—	1 036 900 793	—	1 013 116 000
INDUSTRIAL MINERALS				
Asbestos ..... t	921 123	75 295 765	86 000	60 600 000
Sulphur ..... t	508 917	27 215 071	296 000	31 373 000
Others	—	12 158 685	—	14 040 000
Total Industrial Minerals	—	114 669 521	—	106 013 000
STRUCTURAL MATERIALS				
Cement ..... t	939 354	69 939 148	990 000	77 239 000
Sand and Gravel ..... t	34 628 047	85 156 975	31 750 000	76 833 000
Others	—	45 001 172	—	45 592 000
Total Structural Materials	—	200 097 295	—	199 664 000
COAL ..... t	20 739 725	1 007 519 670	22 936 000	1 067 476 000
TOTAL	—	2 359 187 279	—	2 386 269 000

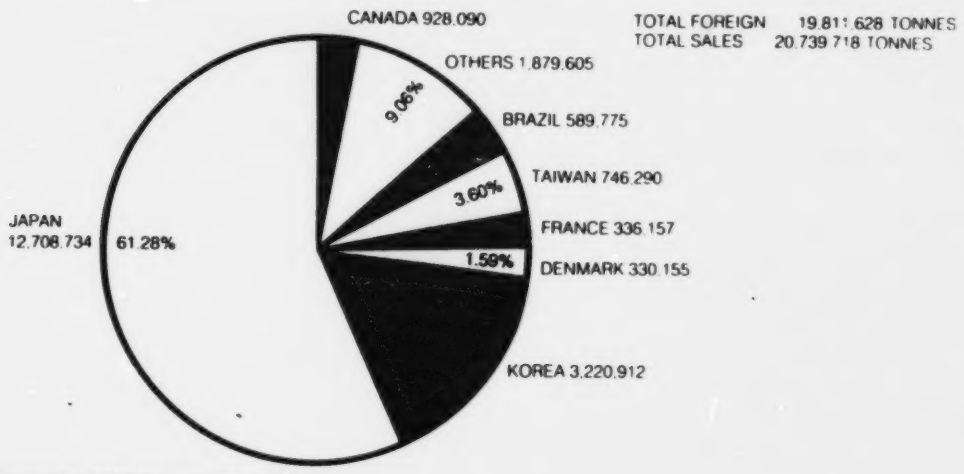
Provincial Revenue from the Mining Industry

	1981	1982	1983	1984	1985 (Est.)
Claims	4,178,169	3,541,482	4,202,796	4,125,943	3,984,549
Coal licences and rentals	3,128,752	2,954,387	2,704,183	2,816,777	2,630,730
Coal royalties	6,011,820	7,097,772	7,839,588	18,709,029	22,856,113
Iron ore royalties	24,295	45	00	00	00
Mineral land taxes	10,999,205	13,989,511	14,570,271	16,817,588	19,088,335
Mineral resource taxes	32,153,394	1,136,895	(1,522,314)*	7,372,346	1,357,896
Mining taxes	15,747,983	6,378,279	910,831	2,297,638	3,742,405
TOTAL	72,243,618	35,098,371	28,705,355	52,139,321	53,660,028

NOTE: Excludes rentals and royalties on industrial minerals and structural materials.

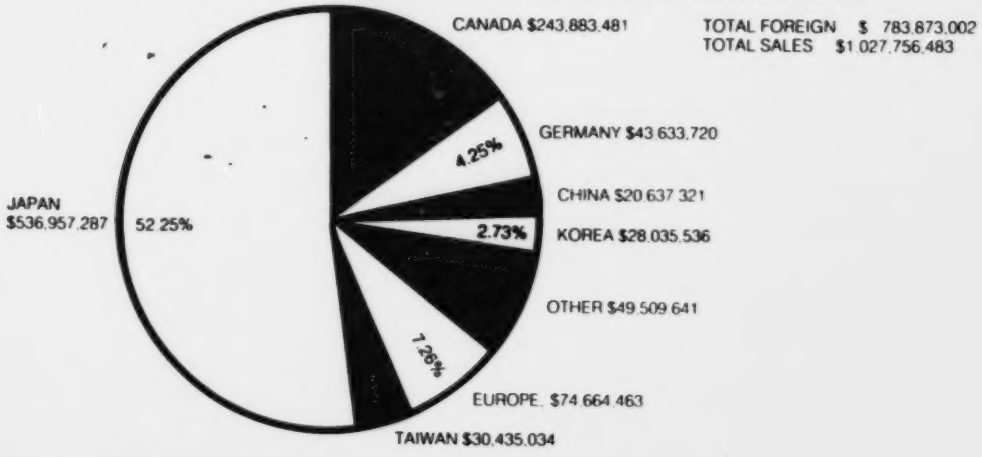
**Rebate for overpayment from previous year.*

DESTINATION OF COAL SHIPPED FROM B.C., 1984 (TONNES)



Complete 1985 figures not available.

DESTINATION OF METALS IN ORES AND CONCENTRATES SHIPPED FROM B.C. MINES, 1984



Complete 1985 figures not available.

EMPLOYMENT IN THE MINERAL INDUSTRY IN B.C. TO 1984

	Metals	Coal	Structural Materials	Industrial Minerals	Exploration & Development	Total
1964	7,909	713	1,737	509	772	11,640
1974	10,867	2,522	1,677	646	2,848	18,560
1981	14,401	3,620	693	678	7,201	26,593
1982	12,583	4,652	573	554	6,651	25,013
1983	10,416	4,298	511	554	3,720	19,499
1984	9,208	5,781	492	437	4,789	20,707

Complete 1985 figures not available.

Major Mines and Selected Potential Mines in British Columbia, 1985

PRODUCING MINES

1. Afton
2. Bell
3. Valley Copper (Bethlehem)
4. Boss Mountain
5. Brenda
6. Brisco
7. Carolin
8. Cassiar
9. Copper Mountain
*10. Endako
11. Equity
12. Erickson
13. Freegold/Dome Mountain
14. Gibraltar
*15. Goldstream
16. Goodhope-Horn Silver
*17. Granisle
18. Highland Bell
*19. Highmont
20. Island Copper
*21. Kitsault
22. Lornex
23. Lynx/HW
*24. Mosquito Creek
25. Parsons
26. Ruth Vermont
27. Scottie
28. Silvana
29. Spillimacheen
30. Sullivan
31. Taurus
32. Western Gypsum

POTENTIAL MINES

33. Babe (Au)
34. Blackdome (Au)
35. Bralorne (Au, Ag)
36. Cirque (Pb, Zn)
37. David Minerals/Rossland (Cu, Au)
38. Kutcho (Cu, Zn, Ag)
39. Schaft Creek (Cu, Mo, Au)
40. Windy-Craggy (Cu, Co)
41. Midway (Ag, Pb, Zn)
42. Lawyers (Au, Ag)
43. QR (Au, Cu)
44. Rea Gold (Au, Ag, Zn, Pb, Cu)
45. Al (Au)
46. Eaglet (Fluorspar)
47. Lara (Au, Zn, Cu)
48. Muddy Lake (Au, Ag)
49. Nickel Plate (Au)
50. Reg (Au)
51. Silbak Premier (Au, Ag)
52. Sulphurets (Au, Ag)

PRODUCING COAL MINES

53. Bullmoose
54. Byron Creek (Corbin)
55. Fording
56. Greenhills
57. Harmer (Sparwood)
58. Line Creek
59. Quintette

POTENTIAL COAL MINES

60. Burnt River
61. Carbon Creek
62. Chute Creek
63. Elco
64. Klappan
65. Monkman
66. Quinsam
67. Sage Creek
68. Telkwa
69. Willow Creek
70. Wolf Mountain

*Did not operate in 1985.

Highlights

A major landmark of 1985 was the signing, in July, of a five-year, $10 million Mineral Development Agreement (MDA) as a subsidiary agreement to the Canada-British Columbia Economic and Regional Development Agreement. The MDA provides funding for Ministry geological surveys and investigations designed to provide basic geological information to assist private sector exploration. It also makes available funds for market, technical and infrastructure planning studies to be cost-shared with the private sector.

In addition, the provincial government was able to provide direct assistance to mining companies with immediate development prospects. A loan agreement negotiated with Serem Inc. will provide up to $4.5 million for the construction of a $9 million access road to the Lawyers project in the Toodoggone area, with construction expected to commence in 1986. This road is expected to stimulate other new mine developments in the area. The Ministry also entered into a $700,000 infrastructure planning agreement with Gulf Resources to facilitate development of the 1.5-million-tonnes-per-year Mount Klappan anthracite project in northwestern British Columbia. These and nine other proposed mine developments or expansions were reviewed under the Mine Development Review Process, designed to expedite development of sound, publicly acceptable mine developments.

The Geology Branch, with MDA assistance, was able to significantly increase its 1985 geochemical and geological field survey program, producing an expanded series of reports for various publications and presentations. The timely production of these reports helped to stimulate interest in exploration.

In late 1985, the Branch opened an office in Vancouver designed to provide increased service to the mining public centred in that city. In addition, a new coal section was created to consolidate the delivery of geological research and data.

The Inspection and Engineering Branch completed a major management reorganization during 1985 in order to streamline its operations. More than 2,000 inspections of mining, quarrying, placer operations, developing mines and exploration properties were carried out. A major review of the Mines Act and its Regulations was begun in 1985 while work continued on improving Mine Reclamation Guidelines. In addition, the Branch sponsored a mechanical/electrical symposium to increase understanding of the latest developments in mining technology.

Also during the year, the legislature approved amendments to the Coal Act designed to streamline tenure administration and eliminate statutory work requirements in favour of increased rentals. This move will relieve coal companies of burdensome and unproductive work requirements while increasing government revenues. The program to computerize Mineral Titles records and reference maps achieved a milestone in 1985 with the production of the first computerized claims map. When the system is completed in 1987, British Columbia will operate Canada's most efficient claims administration system.

PETROLEUM RESOURCES DIVISION

THE PETROLEUM RESOURCES DIVISION is responsible for the administration of Crown-owned petroleum and natural gas in British Columbia and for the regulation of drilling and production operations on land and in provincial offshore areas.

MEDIATION & ARBITRATION BOARD
Facilitates negotiations between petroleum operators and landowners for access to petroleum-bearing lands.

ASSISTANT DEPUTY MINISTER

OFFSHORE PETROLEUM COORDINATOR
Assists in review of west coast offshore exploration potential.

ENGINEERING AND OPERATIONS BRANCH
Regulates field operations to assure safety, protection of the environment and resource conservation. Provides resource analyses, oil and gas reserves data and statistical reports, and assessments of provincial policies and requirements.

- Development Section
- Reservoir Engineering Section
- Field Operations — District Office, Charlie Lake, Fort St. John

PETROLEUM GEOLOGY BRANCH
Carries out geological studies and provides information to the petroleum industry.

- Economic Geology Section
- Geophysical Section
- Reservoir Geology Section

PETROLEUM TITLES BRANCH
Administers title to Crown-owned subsurface oil and natural gas, and provides rights through a competitive bidding process. Approves geophysical operations and assures good practice.

- Lease Administration Section
- Revenue Section
- Drafting Section

The Petroleum Industry in 1985

Continuing recovery of the petroleum industry took place in 1985. Drilling activity, bonus bids paid for oil and natural gas rights, and the areas under tenure to the petroleum industry all showed a substantial increase.

The petroleum industry was active throughout western Canada in 1985. In British Columbia, incentive measures for oil development led to increased oil exploration and infill drilling in established oil fields.

Exploration for natural gas increased by 63 per cent over 1984. Substantial drilling commenced for development of the Deep Basin natural gas area south of Dawson Creek. A total of 237 wells was drilled in the province during the year, 182 for oil, 49 for gas and six service wells. Of the 231 drilled for oil and gas, 118 were successful giving a success rate of 51 per cent. Another 40 wells were on standing status at year's end, their final status awaiting further clarification, and 73 were abandoned.

Two wells were drilled in the southeastern part of the province, one to explore for carbon dioxide for use in enhanced oil recovery projects and one for conventional hydrocarbons. Seismic exploration increased by 15 per cent over 1984 with activity in northeastern British Columbia, the southeast, and in preparation for drilling on Vancouver Island.

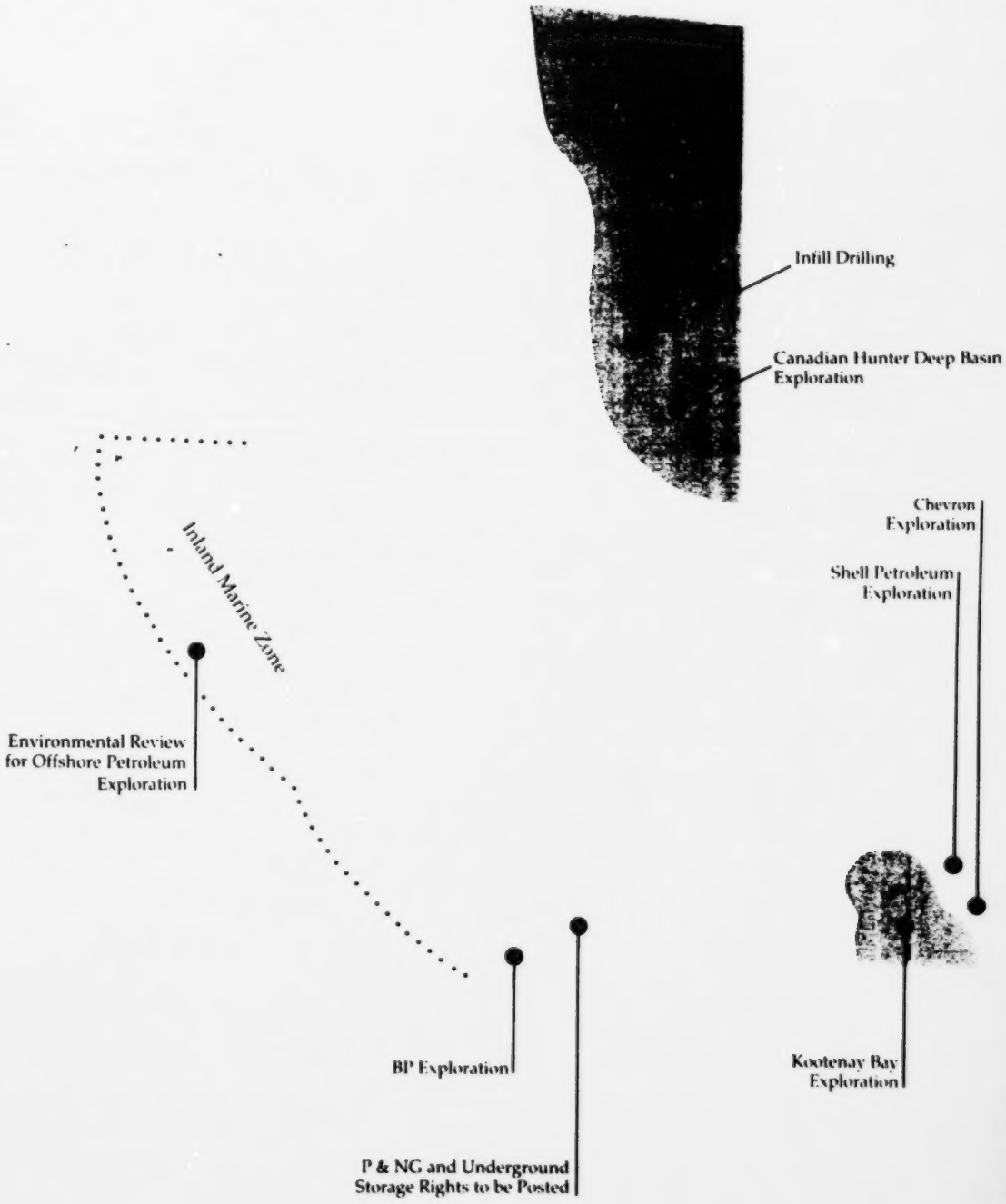
Value of Hydrocarbon Production *($ millions)*
value to the producer at the wellhead

	1981	1982	1983	1984	1985
Crude oil	236	334	402	435	436
Field condensate	3	3	3	3	2
Natural gas	620	543	455	518	538
Gas plant liquids	28	33	39	42	45
Totals	887	913	899	998	1021

Provincial Revenue from the Petroleum Industry
($ millions)

	1981	1982	1983	1984	1985
Rentals & fees	27	31	40	42	46
Crown reserve dispositions	61	17	26	62	88
Royalties (oil and products)	56	76	89	103	93
Natural gas royalties (or equivalent)	158	155	103	114	79
Totals	302	279	258	321	306

Highlights of 1985 Petroleum Activities


Infill Drilling
Canadian Hunter Deep Basin Exploration
Chevron Exploration
Shell Petroleum Exploration
Inland Marine Zone
Environmental Review for Offshore Petroleum Exploration
BP Exploration
P & NG and Underground Storage Rights to be Posted
Kootenay Bay Exploration

Highlights

The Petroleum Resources Division had a particularly active year in 1985. Drilling activity increased, with 21 rigs operating at year's end compared to 15 at the end of 1984. Special well requirements were put into effect to ensure safe operation where hydrogen sulphide-bearing sour gas may be encountered. These measures were based on the experience in Alberta resulting from the Lodgepole blowout. Also, infill drilling and waterflood expansion in established oilfields required extensive engineering and geological support beyond routine requirements.

Several steps were taken to encourage accelerated oil exploration and oilfield development. Drilling incentives were provided through an oil royalty holiday and through changes in the requirements for well spacing and other regulations.

The province's restructured natural gas marketing system, put into effect in 1985, provided a fundamentally new basis for marketing gas, handling and allocating transmission costs, and the collection of provincial revenues. This new royalty-based system, together with the federal-provincial agreements of the Western Accord, ushered in an era of deregulation, with incentives for industry to develop and serve new markets. The implementation of the new system and the accompanying consultation with industry was a focus of much Division effort during the year.

The Petroleum Titles records system was fully computerized by the end of the year and most of the existing records were put into the new system. Initial steps were taken to upgrade computer systems for recording petroleum reserves and production data. Progressive automation of engineering and geological data will proceed, to assist both Ministry and industry requirements.

The Division also provided support for the provincial claim to the Inland Marine Zone (the seabed inland from the Territorial Sea) in preparation for renewed exploration off the west coast. British Columbia holds that the long-standing offshore resources question on the west coast can best be dealt with by confirmation of the boundaries of the province to include the bed of the provincial inland waters such as Hecate Strait, Queen Charlotte Sound and Dixon Entrance with extension of the boundary of the province to include the bed of the 12-mile territorial sea.

Preparation for exploration off the coast of British Columbia was carried out through an extensive public review of environmental requirements. The review panel, established under federal-provincial agreement, was to recommend terms and conditions for renewed exploration. Chevron Canada was designated to provide technical information to the review process and presented offshore exploration plans. The report from the review panel was expected early in 1986.

The volume of petroleum production decreased while natural gas production increased moderately in 1985. Total value of oil and gas production during the year was $1.02 billion.

Direct revenues to the province from petroleum and natural gas in 1985 totalled $306 million.

FINANCE AND ADMINISTRATION DIVISION

THE FINANCE AND ADMINISTRATION DIVISION provides support for the Ministry's operations and programs, and manages the assessment and collection of taxes and royalties from the mineral and petroleum industries.

ASSISTANT DEPUTY MINISTER

FINANCE AND RESOURCE REVENUE BRANCH
Provides financial administration for all sections of the Ministry. Administers taxes and royalties assessed under the Mineral Resources Tax Act, Mineral Land Tax Act, Coal Royalty Regulations and Petroleum and Natural Gas Royalty Regulations.

ADMINISTRATION BRANCH
Manages office space and equipment vehicles, telecommunications, mail and courier services for the Ministry. It also administers distribution of Ministry maps and publications.

DATA SERVICES BRANCH
Plans and manages data processing operations, including automation of Mineral Titles and Petroleum Titles systems.

PERSONNEL SERVICES BRANCH
Responsible for staff recruitment, labour-management relations and staff training and development programs.

Highlights

Revenue collections by the Ministry in 1985/86 declined by 19 per cent to $327.4 million from the $407.6 million collected in 1984/85. The primary reasorf for this decline was the softness in volumes and price in the U.S. export market. Petroleum royalties also dropped as the result of severely reduced world oil prices. However, the sale of drilling rights showed an increase in 1985 to $88 million, up $26 million from the previous year.

In 1985, the Finance and Administration Division completed a review of information systems, studied the impact of computer technology on the workplace environment, and continued to implement its program of automation and computerization. This included installation of new systems in the Charlie Lake field office.

The Ministry become the first government body in British Columbia to receive federal permission for field programming of synthesized portable radio telephones. As well, an Emergency Radiotel Agreement was reached with another major user of field communication systems, the Ministry of Forests. The feasibility of entering into an agreement with the Ministry of Environment for a cooperative field check-in system was under study, as was the possible use of Emergency Position-Indicating Radio Beacon (EPIRB) equipment.

Staff development programs focused on key Ministry needs, such as computer and financial training and professional development. The self-development course *Taking Charge of Your Career*, offered to women of the Ministry, attracted 60 participants during the year.

Ministry of Energy, Mines and Petroleum Resources
Details of Expenditures by Appropriations and Activities, and by Standard Expenditure Classification

For the Fiscal Years 1984/85 and 1985/86
(These two fiscal years bracket the 1985 calendar year.)

Summary of Expenditures	FISCAL YEAR 1984/85	FISCAL YEAR 1985/86 (Est.)
Minister's Office	146,711	179,728
Resource Management Program (net of recoveries)		
Executive Management	539,335	755,450
Finance and Administration Division	3,844,618	2,485,172
Energy Resources Division	1,746,813	2,944,055
Mineral Resources Division	8,040,428	8,818,258
Petroleum Resources Division (Note 1)	8,923,871	4,458,249
British Columbia Utilities Commission (net of recoveries)	1,777,306	2,336,210
Fort Nelson Indian Band Revenue Sharing Agreement Statutory	1,439,120	778,271
Financial Administration Act Sec. 24 (c) — Interest on Revenue Refunds	200,625	26,249
Financial Administration Act Sec. 22 — Utilities Hearings (Note 2)	0	0
Financial Administration Act Sec. 22 — Mount Klappan Planning Studies (note 3)	0	0
Mines Act Sec. 15 (2) — Mine Improvement	32,785	16,703
Mineral Development Agreement (Net of Recoveries)	0	402,000
Financing Transaction — NORP Program (Net of Recoveries) (Note 4)	0	0
TOTAL	26,691,612	23,200,245

Standard Expenditure Classification	FISCAL YEAR 1984/85	FISCAL YEAR 1985/86 (Est.)
Salaries	12,245,926	12,360,627
Supplies and Services	6,062,544	7,500,331
Capital (Note 1)	6,872,022	2,188,646
Other Expenditure (NORP Program Utilities Hearings & Mount Klappan Project)	54,813,749	9,437,496
Grants (Includes Fort Nelson Revenue Sharing Agreement)	1,511,120	1,150,641
Recoveries (NORP Program, Utilities Hearings and Mount Klappan Project)	(54,813,749)	(9,437,496)
Total	26,691,612	23,200,245

Notes

1. Amount shown includes $6,400,000 in Fiscal 84/85 and $1,500,000 in Fiscal 85/86 for capital construction of a petroleum resource road to Desan Lake.
2. Vancouver Island Pipeline Hearing incurred fully recovered costs of $244,927 in fiscal 84/85.
3. Mount Klappan Planning Studies costing $165,250 in Fiscal 84/85 were fully recovered from the study participants.
4. Payments to producers under the federal government's New Oil Reference Price (NORP) program were eliminated by the Western Accord in 1985.

MINISTRY TELEPHONE DIRECTORY

DEPUTY MINISTER'S OFFICE

.....	387-5137
Executive Coordinator	387-5137
Communications Branch	
General Inquiries	387-5178
Library	387-6407
Publications Production	387-5631

ENERGY RESOURCES DIVISION

Assistant Deputy Minister	387-1916
Policy Development Branch	387-5231
Project Analysis Branch	387-5231
Forecasts and Special Projects Branch	387-5231

MINERAL RESOURCES DIVISION

Assistant Deputy Minister	387-6242
Mineral Titles Branch	387-4417
Central Records	387-4417
Area Titles Management	387-4417
Mineral Titles Drafting	387-4417
Inspection & Engineering Branch	387-3781
Mineral Geology Branch	387-5975
Resource Data & Analysis	387-5975
Geoscience Projects	387-5068
Drafting	387-5975
Applied Programs	387-5538
Lapidary	387-6758
Analytical Laboratory	387-6249
Mineral Policy & Evaluation Branch ..	387-3787
Mineral Development Agreement (MDA)	387-5975

PETROLEUM RESOURCES DIVISION

Assistant Deputy Minister	387-3485
Engineering & Operations Branch ...	387-5993
Reservoir Engineering	387-5993
Development Engineering	387-5993
File Room	387-5993
Petroleum Geology Branch	387-5993
Drafting	387-1908
Petroleum Titles Branch	387-1908
Drafting	387-1908
Offshore Coordinator	387-1908

FINANCE & ADMINISTRATION DIVISION

Assistant Deputy Minister	387-5135
Finance & Resource Revenue Branch	
Resource Revenue	387-6991
Financial Services	387-5185
Administration Branch	387-1368
Publications Distribution	387-3188
Mail/Supply Room	387-6248
Data Services Branch	387-1267
Personnel Branch	387-3775

DISTRICT OFFICES

Fernie	423-6884
Fort St. John (Charlie Lake)	787-3450
Mediation & Arbitration Board	787-3403
Kamloops	828-4566
Nanaimo	758-8971
Nelson	354-6125
Prince George	565-6125
Quesnel	992-4222
Smithers	847-7383
Vancouver	
Mineral Titles	660-2672
Inspection & Engineering	660-9363